CLAIMS

1. A vacuum pump non-return valve comprising a valve body that defines a through-passage having an inlet end and an outlet end, an annular elastomeric insert located on the valve body intermediate the inlet and outlet ends and defining a valve seat, and a ball arranged to seat against the valve seat to prevent passage of gaseous fluids from the outlet end to the inlet end and being displaceable, in use, from the valve seat by pressurised gaseous fluid in the inlet end to permit passage of the gaseous fluid from the inlet end to the outlet end.

2. A vacuum pump non-return valve comprising a valve body that defines a through-passage having an inlet end and an outlet end, a valve seat disposed intermediate said inlet and outlet ends, and a ball, wherein said valve seat is defined by an insert made of an elastomeric material, the ball being arranged to seat against said valve seat to prevent passage of gaseous fluids from said outlet end to said inlet end and being displaceable, in use, from said valve seat by pressurised gaseous fluid in said inlet end to permit passage of said gaseous fluid from said inlet end to said outlet end.

3. A valve as claimed in claim 1 wherein said ball is made of a material selected from the group comprising metal, polymer and ceramic.

4. A valve as claimed in claim 3 wherein said ball is coated with a non-stick material to prevent sticking to said valve seat.

5. A valve as claimed in claim 1 wherein said insert is an O-ring.

6. A valve as claimed in claim 1 wherein said insert is made of a material selected from the group comprising fluoroelastomer and perfluoroelastomer.

7. A valve as claimed in claim 1 wherein said valve body is a casting.

8. A vacuum pump non-return valve comprising a cast body part having an inlet, an outlet and a location for receiving an insert, an insert made of an elastomeric material located at the location and a ball, the insert defining a valve seat, the ball being arranged to seat on the valve seat to prevent passage of gaseous fluids from the outlet to the inlet and being displaceable, in use, from the valve seat by gas pressure acting on an upstream facing side thereof to permit the gaseous fluid to pass from the inlet to the outlet.

9. A vacuum pump comprising a non-return valve in a flowpath for gaseous fluids exhausted from the pump, the valve comprising a valve seat insert and a ball, characterised in that said valve seat insert is made of an elastomeric material and is positioned relative to said flowpath such that when, in use, said ball is seated on the valve seat insert, the flow of gaseous fluids in said flowpath is prevented and when there is a predetermined gas pressure in said flowpath upstream of the ball, the ball is moved from said valve seat insert by gas pressure so that the gaseous fluid can flow in said flowpath downstream of the ball.

10. A pump according to Claim 9 wherein the insert comprises an annular elastomeric insert located intermediate an inlet end and an outlet end of the flowpath.

11. A method of preventing backflow of exhaust gas to a vacuum pump comprising providing a valve seat comprising of an insert made of an elastomeric material in a flowpath for said exhaust gas, and providing a ball on said valve seat to prevent passage of said exhaust gas, the ball being arranged such that it seats against said valve seat under the influence of gravity and is displaceable against gravity by gas pressure upstream of said ball.